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# Adapting sensory integration theory terminology into Estonian based on the assessment tools Evaluation in Ayres Sensory Integration, Sensory Profile 2, and Adolescent/Adult Sensory Profile

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#### **ABSTRACT**

Sensory integration theory elucidates the relationship between the human nervous system's capacity to process and integrate sensory sensations and behaviour. The Estonian setting required the adaptation of trustworthy evaluation instruments and terminology in order to deliver evidence-based sensory integration interventions. The objective of the research was to define Estonian sensory integration terminology derived from adaptations of the Evaluation in Ayres Sensory Integration, Sensory Profile 2, and Adolescent/Adult Sensory Profile tests, thereby establishing a theoretical foundation for professional sensory integration interventions in occupational therapy services. The research was conducted as a multiphase study. The selection of key terms from all the assessment tools was determined by the adaptation process of the aforementioned tests. Functional outcomes were prioritised over literal equivalence in the formulation of Estonian terms. The research group developed Estonian terms in accordance with the record structure as a component of the occupational therapy term foundation, utilising the Estonian terminology database Ekilex. Phrased terms were chosen based on their overlap and frequency of occurrence in the assessment tools as well as the research group's experiences with terms that are specific but presently used with ambiguity. 48 prevalent terms with examples were incorporated into Ekilex and are publicly available as a result of the adaptation process of the Evaluation in Ayres Sensory Integration, Sensory Profile 2, and Adolescent/Adult Sensory Profile. The adaptation of the tests provided the possibility of establishing the basis for a functional and professional sensory integration theory terminology in Estonian.

### 1. Introduction

Sensory integration (SI) theory explains the connection between sensory processing and integration in the nervous system and behaviour. SI focuses on the processing of sensory information: what we see, smell, taste, hear, touch, and also our sense of balance and body awareness. Through the cooperation of these systems, individuals are capable of accurately interpreting a variety of everyday situations and behaving in a manner that is appropriate [1]. Nervous system responses to sensory stimuli vary from individual to individual. Occupational therapy assessment and intervention are necessary when these responses affect basic and meaningful human activities that are related to self-care, sleep, play, education, work, and sociality [2,3]. The theory of SI was initiated by the occupational therapist Dr A. Jean Ayres in 1963, and the trademark of this theory-based approach is Ayres Sensory Integration® (ASI). ASI includes a well-developed theory based on science, a practice model, and a set of standardised, structured, and unstructured tests [4].

SI is a relatively novel and developing field in Estonia. Standardised assessment tools from the SI framework were employed in Estonian occupational therapy practice; however, none have been adapted to the Estonian cultural space. Consequently, it is essential to establish standardised terminology in SI, as the quality of occupational therapy services can be enhanced through the use of unambiguous terms.

Professional words refer to the labels given to concepts. Professional vocabulary is essential for clear and logical reasoning [5]. Occupational therapists deficient in the knowledge of professional terminology are less likely to provide patients with clear and comprehensible health information [6]. Hence, researchers and health professionals need to have access to reliable, evidence-based sources and metrics in their respective languages and cultures to conduct cross-cultural research and/or deliver quality service [7].

ASI standardised, structured, and unstructured test sets include both the oldest and the most recent tests. The Southern California Sensory Integration Test (SCSIT) was produced and published by Ayres in the 1970s [8]. Other authors have developed tests derived from Ayres' research to evaluate SI [4]. One of the most common assessment tools among occupational therapists is the Sensory Profile (SP), created by Prof. Winnie Dunn [9]. To assess individuals' sensory integration throughout their life span, Dunn developed the Adolescent/Adult Sensory Profile (AASP) [10]. The most recent test in terms of publication is the Evaluation in Ayres Sensory Integration (EASI), which was produced in 2018 in the USA based on Ayres' original work with the SCSIT [11]. In order to facilitate precise and focused SI therapy, it is crucial to complete high-quality SI assessments, which necessitates that the tests be pertinent to the country in which they are implemented. Translated evaluation tools are necessary to ensure that. The absence of reliable and valid evaluation tools and uniform terminology in the domain of SI is a significant issue, as numerous individuals could benefit from SI interventions to engage in daily life activities. The provision of high-quality service depends on a correct and accurate assessment and a comprehensive understanding of the person's cultural, linguistic, and ethnic background [7].

The translation of SI theory terminology into Estonian was based on adaptations of the SP2, the AASP, and the EASI. The SP2 is a metric that is frequently employed in clinical evaluation as well as in research. The SP offers insights into the impact of sensory processing on a child's daily coping mechanisms [12]. The SP2 is an upgraded version of the questionnaire for parents, caregivers, and teachers to assess sensory processing and modulation, body perception, and practice [1]. It derives from a standardised evaluation of what the child's behavioural tendencies are in response to certain stimuli, determining which sensory systems help and which create barriers in the daily activities. Some children with dysfunction respond differently to sensory stimuli compared to those without dysfunction due to their distinct sensory processing [12]. The SP2 is a metric to assess how sensory processing problems affect the child in different environments (home, school, community). This measure is applicable to children of a wide age range, from birth to the age of 14 [13]. The SP2 test is suitable for typically developed children and for children with developmental delay, attention deficit and hyperactivity disorder (ADHD), autism spectrum disorder (ASD), learning disabilities, or intellectual disabilities [1].

The AASP is an assessment tool based on Dunn's model – a self-assessment questionnaire for people aged 11–65 and over to measure sensory processing [10]. The measure

indicates an individual's sensory profile as four patterns of sensory processing (low registration, sensory seeking, sensory sensitivity, and sensory avoiding) [14]. The assessment tool was used, for example, in the study of adults with ADHD [15] as well as for people suffering from post-traumatic stress disorder (PTSD) [2] because they might have sensory underor over-sensitivity. In addition, during the assessment of individuals with schizophrenia, heightened risk of psychosis, or obsessive-compulsive disorder (OCD), these clients typically exhibit higher sensory sensitivity, avoiding sensations and refraining from seeking stimuli or responding to them fully [16].

The EASI assessment was created in the USA in 2018. The purpose of the EASI was to provide an inexpensive and virtually accessible practical assessment instrument for evaluating SI in children aged 3–12 years, ensuring that the test results are reliable, valid, and relevant to populations worldwide [11]. The EASI is exclusive since it is the first evaluation tool containing normative data gathered from more than 80 countries globally [17].

Considering the aforementioned points, it can be assumed that the research problem concerns the absence of standardised and culturally adapted SI terminology within the Estonian occupational therapy practice. The following research objectives were formulated: translating the assessment tools EASI, SP2, and AASP into the Estonian cultural context; developing Estonian SI terminology; and creating corresponding educational materials.

# 2. Materials and methods

To adapt the aforementioned tests into the Estonian context, the research group initiated the application study 'Develop terminology of Sensory Integration theory and adjust assessment tools Evaluation in Ayres Sensory Integration, Sensory Profile 2 (Infant, Child, Toddler, School and Short Form) and Adolescent/Adult Sensory Profile to the context of Estonia'. The research group included four occupational therapists — one of them an ASI practitioner — an English philologist, and an Estonian philologist.

When adapting the AASP and the SP2 to the Estonian cultural context, in addition to the International Test Commission guidelines [18], an eight-step standardised translation and cross-cultural adaptation (TCCA) procedure [19] was used. Additionally, the research group included occupational therapy students in the first part of the study. Two students were adapting the AASP and the SP2 as part of their bachelor's theses. The final SI terminology was developed through the test adaptation process, as seen in Fig. 1. Below, the most important observations of the process are highlighted.

Stage 2 was the most important phase in the evolution of the terminology. In Stage 1, a qualified translator, aware of the translation's purpose, executed the translation. Subsequently, in Stage 2, the translation was synthesised by two independent and competent individuals, both linked to the profession, fluent in the source language and native speakers of the target language. The feedback in Stage 2 clarified the meaning of the terms.

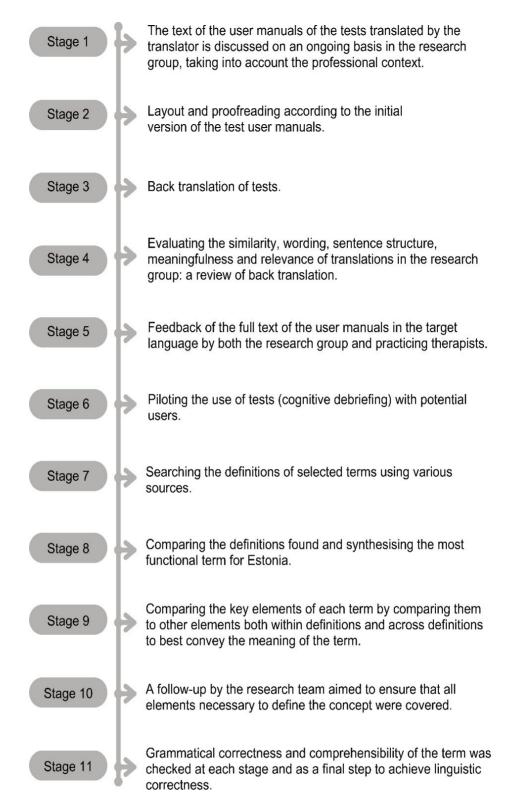


Fig. 1. Development process of sensory integration terminology.

Stage 3 contained a translation of the translated text back into the original language. The back-translator, an English philologist with a high-level command of the English language, was bilingual, spoke the target language as her mother tongue, and had not previously read the original. This stage was crucial for identifying substantive errors, such as inconsistencies, misunderstandings, and other significant mistakes.

The activities of the research group consisted of professional editing and representation of the translation in the target language. At regular meetings, the Estonian translation

was reviewed; it was compared with the original text in the original language, and the professional context was discussed. In Stage 4 (after the back translation), the research group evaluated the similarity, wording, sentence structure, meaningfulness, and relevance of the translations. Ambiguities and discrepancies were removed. The terms and wording were agreed upon; the final wording was synthesised. The terms and wording agreed upon are listed in Table 1. In an agreement with the copyright holder, Pearson Clinical & Talent Assessment, proofreading and layout were completed by the

authors of the bachelor's theses using MS Office (Microsoft Word, etc.).

Stage 5 provided added value for the development of the terminology. Three occupational therapists submitted feedback on the full text of the instruction manuals in the target language. In addition, a survey was conducted among two practicing therapists with professional experience (including one physiotherapist who provided feedback on the AASP manual). The authors of the bachelor's theses performed cognitive debriefing and piloting of the AASP and SP2 tests with five native Estonian speakers possessing diverse levels of education and lacking special needs. The seven stages (Fig. 1) of the adaptation process were perceived as a complex, reasoned, and analytical procedure that facilitated a deep knowledge of the subject matter [20], which was essential for contributing to the formulation of Estonian terminology.

### 2.1. Selection of adaptable vocabulary

As a continuation for the previously mentioned applied research, the research group identified concrete terms for indepth study and analysis to prevent misuse and regulate terms that currently possess varied meanings, hence promoting a more universal and accurate use. Consequently, with adaptation, it was also essential to phrase the specialised terminology in Estonian. The terms were selected by overlap, frequency, and specificity.

To optimise resources, the previously mentioned Stages 1 and 2 were combined in the adaptation process. The entire applied research group participated, as it was necessary to thoroughly discuss the Estonian terms. Previously, only the concept of 'sensory modulation' had been represented as part of a graduation thesis, but even this generated much discourse. According to the International Test Commission's test adaptation guidelines [18], the translation must be appropriate for the target group, i.e. natural and acceptable, thus the functionality of the terms needed to be prioritised. Therefore, it is advisable to avoid literal translation and instead seek a balanced approach that considers the meaningfulness, the terms used, and the content across different languages [7]. The principle of functionality [18] was adhered to throughout the process. To preserve the internal validity of the text, various sections of the user manuals were translated, beginning with the more practical components and subsequently moving on to the more theoretical ones. This enabled the research group to identify connections with practice and to ensure that the terms were literally adapted throughout the whole adaptation process. This also contributed to the clarity of the Estonian wording in the theoretical section.

The further selection of terms was divided into distinct, theory-based core terms of SI theory (with numerous theory-oriented terms derived from the latest SI textbook and selected from the instructional materials of internationally high-level lecturers from the Banister training) and more innovative terms from the EASI that had not been previously used professionally in Estonia. Some of the terms are atypical and have seen limited application within the Estonian context due to a lack of corresponding SI specialists.

### 2.2. Terminology study design method

In the research group, the elements of the consensus method were implemented, developed by the European Network of Occupational Therapy in 2003 [5], and the process was conducted as follows:

- 1. Definitions of selected terms were sought, although the literature was applied more extensively than solely pertaining to specific models or theories.
- 2. The definitions of the terms found in the literature were compared, and the most functional term for the Estonian practice was synthesised from them.
- 3. For each term, the key elements included in the definition were identified. These elements were compared with other elements both within definitions and across definitions to produce an explanation or an example that best conveys the content of the definition.
- 4. A discussion followed within the research group, the aim of which was to examine the synthesised definition and its description as a whole and to conduct a follow-up check to ensure that all the essential elements for defining the concept were reflected.
- The participation of a philologist of the Estonian language in the research group facilitated the verification of grammatical correctness and comprehensibility of the term at each stage, ensuring linguistic accuracy.

# 2.3. Requirements of the Estonian terminology database Ekilex

Once the terms were selected for an Estonian counterpart and incorporated into the Estonian terminology database, the research group commenced independent work on the selected terms. According to the requirements of Ekilex, the following categories had to be developed for all terms:

- 1. Entry in Estonian a term that remains in use in Estonian
- 2. Entry in English the original English term
- 3. Definition the Estonian definition was created based on reference sources
- 4. Context (example) examples in Estonian were derived according to the cultural context in cooperation with the research group
- 5. English definition definition corresponding to the English term
- 6. Foreign reference sources evidence-based SI materials (mostly the latest SI book)
- 7. Estonian reference sources professional scientific literature, e.g. in neurology
- 8. Synonyms it was emphasised when a word had expressions with the same meaning
- 9. Connected terms terms that have similar context
- 10. It was possible to label the terms as 'Avoid', 'Preferred Term', 'Proposal', 'Questionable', 'Previous'

### 2.4. Ethical considerations

As the copyright holder of the AASP and SP2 tests is Pearson Clinical & Talent Assessment, a permission to translate and adapt the tests was requested from the company and a license agreement was signed (LSR – 284727). The tests were subject

to the terminology creation completed by the researchers. As this was not a study on human beings, no other ethics approvals were required. The EASI was part of the national normative data collection, and a signed Regional/ Country Lead Agreement permitted the translation of the test. The terms were developed based on the ethics and philosophy of the specialty according to the ethical code of the Estonian Association of Occupational Therapists.

# 3. Results

The multiphase study was adopted as an appropriate method for producing SI standard terminology for occupational therapists. All six members of the research group participated in the study from its inception to its conclusion. A total of 237 SI-related terms were identified; however, 48 terms were selected for analysis in this study. These terms were categorised into subgroups according to SI theory, assessment, intervention, and dysfunctions. The final selection and adaptations are presented in Table 1. Furthermore, 48 adapted terms with definitions and examples have been inserted into the Estonian word database and are publicly available at https://sonaveeb.ee/ds/tegter.

The multiphase study process supported the rapid attainment of consensus on definitions of the fundamental terms such as sensory, Ayres sensory integration, sensory motor integration, praxis, and dyspraxia. During the course of the study, the research group emphasised that a clear understanding of the definitions of basic terms is essential. The results of this research provide substantial advancements in establishing SI terminology for the Estonian context; yet it is essential to notice the terms that have sparked extensive discussion. In Table 1, these deeper, meaningful content discussion examples are highlighted in grey. Although one can directly translate the example term feedback into Estonian, it fails to convey the substantive meaning that corresponds to the theory of SI. In Estonian, feedback pertains to a reaction or an assessment of something, whereas in SI theory, it is primarily related to human motor and movement patterns. The terms sensory discrimination, sensory discrimination disorder, spatial discrimination, tactile discrimination, and vestibular bilateral integration and sequencing (VBIS) needed similar adjustments to the context of the Estonian language and culture.

Moreover, the research group realised that some expressions in English had no literal terms in Estonian; synonyms and similar words were also missing. Example terms are *feedforward* and *feedforward-control*. Therefore, the research group had to devise completely new Estonian terms. For the new terms to be widely adapted into the Estonian language, outreach among practicing therapists and time are needed.

The study also included the terms that had multiple words with the same meaning in Estonian (example term: *inner drive*). It was necessary to discuss which words were most consistent with SI theory's functionality rather than with verbal correspondence. If the English term allowed, the re-

search team also considered linguistic clarity and comprehensibility for people who are outside the field but who need to understand the terms, e.g. parents or caregivers. Therefore, to the terms *interoception* and *proprioception*, in addition to the preferred term, words were added that also convey meaning to a person outside the specialty.

However, a single definition of the term did not always satisfy the needs for all practical settings, therefore multiple or adapted definitions are necessary in real life. SI is a complex and developing field; therefore, our results are susceptible to modification by practitioners and researchers to accommodate appropriate applications. For example, a definition for the term *sensory diet* has already received a note from a practicing SI therapist to be applicable not only to children but also to adults. Therefore, the definition a sensory diet is a planned and scheduled activity programme designed to meet a child's specific sensory needs should be revised to a sensory diet is a planned and scheduled activity programme designed to meet a person's specific sensory needs.

The terms represented in Tabel 1 are key concepts and constructs within SI theory, rendering their accurate adaptation essential for efficient communication and documentation. The detailed examples provided for each term further enhance understanding and facilitate their accurate application in clinical practice. This process of multiphase study ensures that the adapted terms are suitable and capable of supporting precise assessments and interventions.

### 4. Discussion

The results of this study hold significant importance for the development of SI theory and practice within Estonia. By systematically adapting and integrating terminology from widely recognised assessment tools, such as the EASI, SP2, and AASP, this research establishes a vocabulary that enhances clarity and consistency among professionals. This is crucial for ensuring that SI interventions are accurately understood and implemented, thereby enhancing the quality of occupational therapy services. This aspect of identity has been highlighted in Attard et al. [6] and Creek [5]. The precise translation and contextual adaptation of these terms ensure their cultural relevance and linguistic appropriateness for Estonian practitioners. To ensure the aforementioned ideas, the International Test Commission guidelines and the TCCA procedure were employed in the first part of this study, as it was recommended by Schuster [19]. In the process of translating the tests and user manuals, flexibility proved advantageous in conveying the validity of the content of the text parts of the text were translated in a sequence that enabled the members of the research group to better decipher the content and define common terms for the next part of the research. Initially, it was necessary to work with the test sheets used in practical settings, as this allowed the research group to agree on core terminology. Only then it became clearer how to commence working with the test manual. The authors of this study agree with Ponce Gea and Serrano Pastor [20] that to attain a deeper understanding of professional

Table 1. Terms adapted to the Estonian cultural context

Term in English	Term in Estonian	Term in English	Term in Estonian
apraxia	apraksia	sensitisation	tundlikkus
arousal	preferred term: erksuse tase; is also used: aktiivsustase	sensory	sensoorne
Ayres sensory integration (ASI)	Ayrese sensoorne integratsioon (ASI)	sensory defensiveness	sensoorne kaitsereaktsioon
bilateral integration	kahe kehapoole koostöö	sensory diet	sensoorne dieet
body scheme	kehaskeem	sensory discrimination	sensoorne eristamine
clinical observations	kliiniline vaatlus	sensory discrimination disorder	sensoorse eristamise häire
constructional apraxia	konstruktsionaalne apraksia	sensory integration	sensoorne integratsioon
dyspraxia	düspraksia	sensory integrative dysfunction	sensoorset töötlust tervikuna hõlmav düsfunktsioon
feedback	tagasiside mehhanism	sensory modulation dysfunction	preferred term: sensoorne reguleerimise häire; is also used: sensoorne modulatsiooni häire
feedback-dependent tasks	tagasisidestamist nõudvad ülesanded	sensory motor integration	sensomotoorne integratsioon
feedforward	edasiside mehhanism	sensory over-responsivity	preferred term: sensoorne ülitundlikkus; is also used: sensoorne ülevastuvõtlikkus
feedforward-control	preferred term: edasisidestamise juhtimine; is also used: edasisuunamise juhtimine	sensory perception	sensoorne taju
fidelity measure	usaldusväärsuse mõõdik	sensory processing disorder	sensoorse töötluse häire
habituation	harjumuslikkus	sensory responsiveness	sensoorne reageerimisvõime
ideation	mõtteloome	sensory under-responsivity	preferred term: sensoorne alatundlikkus; is also used: sensoorne alavastuvõtlikkus
ideational apraxia	ideatoorne apraksia	sequencing	järjestamine
inner drive	preferred term: sisemine motivatsioon; is also used: ajejõud, tõukejõud, sisejõud	somatodyspraxia	somatodüspraksia
intensity	intensiivsus	somatopraxia	somatopraksia
interoception	preferred term: sisetundlikkus; is also used: interotseptsioon	somatosensory	somatosensoorne
neuroplasticity	neuroplastilisus	spatial discrimination	ruumiline eristamine
praxis	praksia	stereognosis	stereognoosia
projected action sequences	kindlal viisil sooritatavad tegevusjadad	tactile defensiveness	preferred term: taktiilne kaitsereaktsioon; is also used: puutemeele kaitsereaktsioon
proprioception	preferred term: propriotseptsioon; is also used: asendimeel	tactile discrimination	taktiilne eristamine
sensation frequency	aistingu sagedus	vestibular bilateral integration and sequencing (VBIS)	kehapoolte vestibulaarne integratsioon ja järjestamisvõime (KVIJ)

terminology, it is required to utilise a multistep approach, rather than to limit it with direct translations.

It is essential to note that while the EASI, SP2, and AASP are widely respected and utilised within the field of SI, they may not encompass the full spectrum of sensory integration concepts and practices pertinent to all contexts. Expanding the array of assessment tools and incorporating additional sources could provide a more comprehensive set of terms and further enhance the rigour of the adapted terminology. Thus, further work on terminology is essential.

The research contained weaknesses, primarily related to resource constraints and the innovativeness of the SI area in Estonia. Only one of the research group members was a certified SI therapist; however, all other members had a somewhat greater understanding and experience with SI theory than regular occupational therapists.

The impact of this adapted SI terminology on clinical practice and outcomes has yet to be thoroughly investigated. While the current study provides a solid foundation, longitudinal studies are essential to evaluate how these terms influence the effectiveness of SI interventions over time. Tracking the implementation and outcomes associated with the adapted terminology will provide valuable insights into its practical utility and potential areas for further enhancement. Ongoing feedback from practitioners employing these terms in real-world settings will be crucial for iterative improvements and maintaining the terminology's relevance and efficacy.

Furthermore, the inclusion of these terms in the Estonian terminology database Ekilex represents a significant advancement in the field. By making these terms publicly available, the research provides a valuable resource for occupational therapists, educators, researchers, and students. Moreover, the identification and selection of 48 prevalent terms based on their frequency of occurrence in the assessment tools underline the rigour and comprehensiveness of this research.

# 5. Conclusions

To conclude, the research tasks have been accomplished. Initial SI-based tests have been adapted to Estonian and there is a set of Estonian terminology pertinent to occupational therapy. The terminology is publicly accessible, aiming to support the field of occupational therapy, which enables the use of a common professional language both in teaching and research as well as in the provision of occupational therapy services.

The results of this research provide a solid foundation for the continued development of SI theory and practice in Estonia. By providing a functional and useable set of terms, the study enhances the professional lexicon available to occupational therapy students, occupational therapists, and other SI practitioners. This contribution not only bolsters evidence-based practice but also promotes enhanced coherence and integration within the field. Ultimately, the adapted terminology will contribute to improved outcomes for individuals undergoing SI interventions, thereby advancing the overall quality of occupational therapy services in Estonia.

Future plans include studying the usability of the terms among practicing occupational therapists and continuous additional work on the term base.

# Data availability statement

All data are available in the article.

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### References

- Bundy, A. C. and Lane, S. J. Sensory Integration: Theory and Practice. 3rd ed. F. A. Davis, 2019.
- Engel-Yeger, B., Palgy-Levin, D. and Lev-Wiesel, R. The sensory profile of people with post-traumatic stress symptoms.
  *Occup. Ther. Ment. Health.*, 2013, 29(3), 266–278. https://doi.org/10.1080/0164212X.2013.819466
- Walbam, K. M. The relevance of sensory processing disorder to social work practice: an interdisciplinary approach. *Child Adolesc. Soc. Work J.*, 2014, 31(1), 61–70. https://doi.org/10.1007/s10560-013-0308-2
- Smith-Roley, S., Bissell, J. and Clark, G. J. F. Occupational therapy for children and youth using sensory integration theory and methods in school-based practice. *Am. J. Occup. Ther.*, 2015, 69(Supplement\_3), 6913410040p1-6913410040p20. https://doi.org/10.5014/ajot.2015.696S04
- Creek, J. A standard terminology for occupational therapy. Br. J. Occup. Ther., 2006, 69(5), 202–208. https://doi.org/10. 1177/030802260606900502
- Attard, E., Musallam, A., Vaas, K., Chaney, T., Fortuna, J. and Williams, B. Health literacy in occupational therapy research: a scoping review. *Open J. Occup. Ther.*, 2021, 9(4), 1–18. https://doi.org/10.15453/2168-6408.1832
- 7. Sousa, V. D. and Rojjanasrirat, W. Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. *J. Eval. Clin. Pract.*, 2011, 17(2), 268–274. https://doi.org/10.1111/j.1365-2753.2010.01434.x
- 8. Ayres, A. J. Southern California Sensory Integration Tests. Western Psychological Services, Los Angeles, 1972.
- Dugas, C., Simard, M.-N., Fombonne, E. and Couture, M. Comparison of two tools to assess sensory features in children with autism spectrum disorder. *Am. J. Occup. Ther.*, 2018, 72(1), 7201195010p1–7201195010p9. https://doi.org/10.5014/ajot.2018. 024604
- Brown, C. and Dunn, W. Adolescent/Adult Sensory Profile. Therapy Skill Builders, Psychological Corporation, San Antonio, 2002
- 11. Mailloux, Z., Parham, L. D., Smith Roley, S., Ruzzano, L. and Schaaf, R. C. Introduction to the Evaluation in Ayres

- Sensory Integration® (EASI). *Am. J. Occup. Ther.*, 2018, **72**(1), 7201195030p1–7201195030p7. https://doi.org/10.5014/ajot.2018. 028241
- 12. van der Linde, J., Franzsen, D. and Barnard-Ashton, P. The sensory profile: comparative analysis of children with Specific Language Impairment, ADHD and autism. *S. Afr. J. Occup. Ther.*, 2013, **43**(3), 34.
- Critz, C., Blake, K. and Nogueira, E. Sensory processing challenges in children. *J. Nurse Pract.*, 2015, 11(7), 710–716. https://doi.org/10.1016/j.nurpra.2015.04.016
- Brown, C., Tollefson, N., Dunn, W., Cromwell, R. and Filion, D. The adult sensory profile: measuring patterns of sensory processing. *Am. J. Occup. Ther.*, 2001, 55(1), 75–82. https://doi.org/10.5014/ajot.55.1.75
- Kamath, M. S., Dahm, C. R., Tucker, J. R., Huang-Pollock, C. L., Etter, N. M. and Neely, K. A. Sensory profiles in adults with and without ADHD. *Res. Dev. Disabil.*, 2020, 104(2), 103696. https://doi.org/10.1016/j.ridd.2020.103696
- Brown, C., Karim, R. and Steuter, M. Retrospective analysis of studies examining sensory processing preferences in people with a psychiatric condition. Am. J. Occup. Ther., 2020, 74(4),

- 7404205130p1-7404205130p11. https://doi.org/10.5014/ajot.20 20.038463
- 17. Collaborative for Leadership in Ayres Sensory Integration (CLASI). *Getting to Know the Evaluation in Ayres Sensory Integration (EASI)*. https://static1.squarespace.com/static/65d8 48d2a79890353ca414ea/t/661531e44309717442c99cee/171266 5065692/Getting%2Bto%2Bknow%2Bthe%2BEASI\_interactive%2Bfinal%2B.pdf (accessed 2024-09-27).
- International Test Commission (ITC). ITC Guidelines for Translating and Adapting Tests. 2nd ed. https://www.intestcom. org/files/guideline\_test\_adaptation\_2ed.pdf (accessed 2024-09-07).
- Schuster, C., Hahn, S. and Ettlin, T. Objectively-assessed outcome measures: a translation and cross-cultural adaptation procedure applied to the Chedoke McMaster Arm and Hand Activity Inventory (CAHAI). *BMC Med. Res. Methodol.*, 2010, 10(1), 106. https://doi.org/10.1186/1471-2288-10-106
- Ponce Gea, A. I. and Serrano Pastor, F. J. The cultural element in the adaptation of a test: proposals and reflections on internal and external influences. *Educ. Sci.*, 2022, 12(5), 291. https:// doi.org/10.3390/educsci12050291

Sensoorse integratsiooni teooria terminoloogia sõnastamine eesti keelde, tuginedes hindamisvahenditele "Ayrese sensoorse integratsiooni hindamine", "Sensoorne profiil 2" ja "Noorukite/täiskasvanute sensoorne profiil"

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Sensoorse integratsiooni teooria selgitab seost sensoorse töötlemise ning närvisüsteemi ja käitumise vahel. Teooria keskendub sensoorsete süsteemide (visuaalne, olfaktoorne, gustatoorne, auditoorne, taktiilne, vestibulaarne, propriotseptiivne, interotseptiivne) kaudu saadud informatsiooni töötlemisele ja sobiva käitumusliku vastuse kujunemisele. Sensoorsete süsteemide koostöö tulemusena suudab inimene õigesti tõlgendada erinevaid olukordi ja vastavalt käituda. Tõenduspõhiste sensoorse integratsiooni sekkumiste rakendamiseks tuleb kohandada hindamisvahendid ja terminoloogia Eesti konteksti. Uurimistöö eesmärk oli sõnastada eestikeelne sensoorse integratsiooni terminoloogia, tuginedes hindamisvahenditele "Ayrese sensoorse integratsiooni hindamine", "Sensoorne profiil 2" ja "Nooruki/täiskasvanu sensoorne profiil", et luua teoreetiline alus professionaalsetele sensoorse integratsiooni sekkumistele tegevusteraapias. Terminite eestindamisel keskenduti funktsionaalsusele ja sõnasõnalisele samaväärsusele. Sõnastatud terminid valiti kattuvuse ja esinemissageduse järgi hindamisvahendites, samuti eksperdirühma kogemuste põhjal, keskendudes spetsiifilistele ning seni mitmetähenduslikult kasutatavatele terminitele. Uurimistöö tulemusena lisati Ekilexi andmebaasi koos näidetega 48 erialast terminit, mis on nüüd avalikult kättesaadavad.